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08/324,443 10/17/94 DOYLE

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TOWNSEND AND TOWNSEND  
KHOURIE AND CREW  
STEUART STREET TOWER  
ONE MARKET PLAZA  
SAN FRANCISCO CA 94105

M 02307553  
EXAMINER

DINH, D

ART UNIT PAPER NUMBER 92

4

2317  
DATE MAILED:

05/06/96

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☒ Notice of Draftsman's Patent Drawing Review, PTO-948.
- ☒ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

- ☒ Claims 1-43 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
- ☐ Claims \_\_\_\_\_ have been cancelled.
- ☐ Claims \_\_\_\_\_ are allowed.
- ☒ Claims 1-43 are rejected.
- ☐ Claims \_\_\_\_\_ are objected to.
- ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
- ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
- ☐ Formal drawings are required in response to this Office action.
- ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
- ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
- ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
- ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
- ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
- ☐ Other

EXAMINER'S ACTION

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### Part III DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --  
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4 and 15-16 are rejected under 35 U.S.C. § 102(a) as being anticipated by the University of Southern California's Mercury Project (in public used from Sept. 15, 1994 to March 31, 1995 at <http://www.usc.edu/dept/raiders/>).

As per claim 1, the Mercury Project operated using a method essentially as claimed:

providing client workstation [user computer browsing the WWW] and network server [the Mercury Project server] coupled to a distributed hypermedia network environment [World Wide Web;

displaying at the client workstation a portion of a hypermedia document [HTML document] wherein the document includes an embedded controllable application [controlling a robot arm and air pulse - see page 1 of "USC Mercury Project: Interface"];

interactively controlling said embedded controllable application from said client workstation via communications sent over said distributed hypermedia environment [see page 1 of "USC Mercury Project: Interface"].

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As per claim 2, the Mercury project was accessed using multimedia browser (specifically Mosaic - see p.2 of "USC PRESS RELEASE") running on the client.

As per claim 3, the steps recited is inherent in using the Mercury Project:

issuing from the client one or more commands to the server [HTTP message conveying information resulting from a user clicking on the robot control panel image];

executing, on the network server, instructions in response to said commands [interpreting and responding to the HTTP message];

sending information [HTML document showing the updated robot position and camera image] from the server to the client;

processing said information [parsing the HTML document] at the client to interactively control said embedded controllable application.

As per claim 4, since the browser is controlling the displaying the HTML document and the browser's code/instructions is running on the client computer, the 'instructions' for controlling said embedded application [i.e. interpreting user

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input and sending HTTP message to the server] resides on the client.

As per claims 15-16, they are rejected under similar rationale as for claims 1-2 above. The Mercury Project is a 'multi-dimensional' data visualization application because it provides live-image of a real (3D) environment and position of the robot arm.

h04T01 "Enhanced" The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-43 are rejected under 35 U.S.C. § 103 as being unpatentable over Applicant's disclosed prior art and further in view of Hansen "Enhancing documents with embedded programs: How Ness extends insets in the Andrew ToolKit".

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As per claim 1, Applicant's disclosed prior art has the limitation essentially as claimed - client workstation, network server, receiving and displaying hypermedia document. It is known at the time of the invention that the client and server interact via communications sent over the distributed hypermedia environment (transferring of HTML document, processing links, forms, mapped images, etc.). The disclosed prior art does not have embedded controllable application [executable/ interpretable/ 'launchable' program instructions/ codes] in the hypermedia document].

Hansen teaches enhancing hypertext documents by embedding programs in the documents to allows the documents to responds to readers for applications like animation, simulations, interactive examples etc.[Abstract, p.23 col.1]. It would have been obvious for one of ordinary skill in the art to combine the teaching of Hansen to the disclosed prior art because it would have improved hypermedia information delivery and applications.

As per claim 2, the disclosed prior art teaches a hypermedia browser [Mosaic].

As per claim 3, it is known in the disclosed prior art to issue command from the client to trigger execution on the server and sending response back to the client [processing forms and

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mapped images, etc.]. Hence, the steps would have been apparent in the method as modified.

As per claim 4, Hansen teaches that the embedded program is an object within the hypermedia document. The document is being displayed by a "browser" in the client workstation. Hence, it is apparent that the instructions for activating/controlling the embedded program would reside on the client workstations (i.e. within the browser and/or within the client workstation operating environment).

As per claim 5, it is apparent from p.24 col.2 "response to event", and p.25 4th paragraph -simulating for mouse hit, menu selections, and keystrokes that communication continue between the embedded program and the "browser" to accept and act on trigger events.

As per claims 6-10, Hansen, p.23 col.1, suggested multi-dimensional viewer [simulation, animation], spreadsheet and database [addresses, appointments, course records], and word processing [parameterized letter] applications.

As per claims 11-13, the recited limitations - ISO, TCP/IP, HTTP - are inherent the disclosed prior art.

As per claim 14, Hansen teaches using markup language to specify the embedded program [p.25 col.2].

As per claims 15-16, they are rejected under similar rationale as for claims 1-2 above.

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As per claims 17-22, the recited limitations - volume visualization, 2d image, image analysis, animated sequences, geometric viewer, and molecular modeling - would have been a matter of design choice because they are merely a listing of possible uses and does not affect the method of providing controlling of the embedded program. Hansen disclosed applying the 'enhanced document' in simulations and animation [p.24 col.1]. Hence, the applications recited would have been obvious to one of ordinary skill in the art.

As per claim 23, it is rejected under similar rationale as for claim 4 above.

As per claim 24, it is rejected under similar rationale as for claim 1 above. Hansen does not specifically disclose the step of transferring ..., accepting ..., executing ..., communicating ..., using ... The steps recited is inherent in the disclosed prior art as modified because:

It is well known in the art, at the time of the invention, that HTML documents can contains links, mapped (clickable) images, fill-in forms, etc. It is known that HTML documents transfers involves HTTP protocol messages. The process involves:

transferring, over the network, a hypermedia document [the HTML document] with embedded objects [URL links, mapped

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images, fill-in forms, etc.] from a server computer to the client computer;

accepting first signals from the user input device [clicking on an URL link, or a mapped image, or a form's 'submit' button]

issuing commands [HTTP message with the linked URL, or coordinates where the mapped image was clicked, or the form's content] from the client computer to a first computer in response to the signal [it is known that an HTTP message in an HTML document can direct to any computer connected to the Internet that accept HTTP protocol];

executing instructions by the first computer and generate information about manipulating the embedded object [retrieving or generating a HTML document in response to the HTTP message];

communicating the information to the client [sending the resulting HTML document];

using the client to manipulate the embedded object [displaying the result HTML document by the browser] according to the communicated information [HTML tags in the received HTML document].

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As per claims 25, 27, 29, 31, 33, an HTML document is a hypermedia document.

As per claim 26, it is well known in the art to run application on multiple computer for faster performance. It would have been obvious for one of ordinary skill in the art to run the application on multiple computers because it would have reduce processing time.

As per claim 28, the recited limitation is one of many possible applications for the method of claim 24. It would have been a matter of design choice to provide multi-dimensional image visualization application because the particular recited application does not affect the method of claim 24. It is well known in the art to provide multi-dimensional image visualization in the scientific community. Hence, it would have been obvious for one of ordinary skill in the art to provide multi-dimensional image visualization application in the prior art as modified because it would enable wide spread access to scientists to remotely analyze the images.

As per claims 30, 32, 38, 40, the recited methods are well known in the art for manipulating 3D images.

As per claim 34, it is a combination of claims 24 and 28. Hence, claim 34 is rejected under similar rationales as stated for claims 24 and 28 above.

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As per claims 35, 37, 39, 41, 43, the World Wide Web is a distributed hypermedia environment.

As per claim 36, it is rejected under similar rationale as for claim 26 above.

As per claim 42, the method would have been inherent in the prior art as modified. It would have been obvious to one of ordinary skill in the art to accepted input indicating desired orientation in a multi-dimensional image visualization application because it would enable the user to effectively visualize and manipulate the multi-dimensional image.

**The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.**

Tim Berners-Lee, "Hypertext Markup Language (HTML)", June 1993, discusses and discloses features of HTML.

Berstein et al., US patent 5,204,947, disclose method for providing links in hypermedia services without modifying the documents.

Vertelney et al., US patent 5,202,828, teach user interface icon with embedded applications.

Caro, US patent 4,949,248, teaches a system for shared remote access with application programs executing on more than one computer.

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Swanson, US patent 5,390,314, teaches resource script that can be execute on various different computer systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Dinh whose telephone number is (703) 305-9655. The examiner can normally be reached on Monday-Thursday from 7:00 AM - 4:30 PM. The examiner can also be reached on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached at (703) 305-9717. The fax phone number for this group is (703) 308-5359.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.



D Dinh  
Patent Examiner  
May 3, 1996

102 FT 1111111111

**NOTICE OF DRAFTSPERSON'S PATENT DRAWING REVIEW**

PTO Draftpersons review all originally filed drawings regardless of whether they are designated as formal or informal. Additionally, patent Examiners will review the drawings for compliance with the regulations. Direct telephone inquiries concerning this review to the Drawing Review Branch, 703-305-8404.

The drawings filed (insert date) 10/17/94, are

- A. ☐ not objected to by the Draftsperson under 37 CFR 1.84 or 1.152.  
 B. ☒ objected to by the Draftsperson under 37 CFR 1.84 or 1.152 as indicated below. The Examiner will require submission of new, corrected drawings when necessary. Corrected drawings must be submitted according to the instructions on the back of this Notice.

1. DRAWINGS. 37 CFR 1.84(a): Acceptable categories of drawings:  
 Black ink. Color.

- ☐ Not black solid lines. Fig(s) \_\_\_\_\_  
 Color drawings are not acceptable until petition is granted.  
 Fig(s) \_\_\_\_\_

2. PHOTOGRAPHS. 37 CFR 1.84(b)

- Photographs are not acceptable until petition is granted.  
 Fig(s) \_\_\_\_\_  
 Photographs not properly mounted (must use bristol board or photographic double-weight paper). Fig(s) \_\_\_\_\_  
 Poor quality (half-tone). Fig(s) \_\_\_\_\_

3. GRAPHIC FORMS. 37 CFR 1.84 (d)

- Chemical or mathematical formula not labeled as separate figure.  
 Fig(s) \_\_\_\_\_  
 Group of waveforms not presented as a single figure, using common vertical axis with time extending along horizontal axis.  
 Fig(s) \_\_\_\_\_  
 Individuals waveform not identified with a separate letter designation adjacent to the vertical axis. Fig(s) \_\_\_\_\_

4. TYPE OF PAPER. 37 CFR 1.84(c)

- Paper not flexible, strong, white, smooth, nonshiny, and durable.  
 Sheet(s) \_\_\_\_\_  
 Erasures, alterations, overwritings, interlineations, cracks, creases, and folds copy machine marks not accepted. Fig(s) \_\_\_\_\_  
 Mylar, velum paper is not acceptable (too thin). Fig(s) \_\_\_\_\_

5. SIZE OF PAPER. 37 CFR 1.84(f): Acceptable sizes:

- 21.6 cm. by 35.6 cm. (8 1/2 by 14 inches)  
 21.6 cm. by 33.1 cm. (8 1/2 by 13 inches)  
 21.6 cm. by 27.9 cm. (8 1/2 by 11 inches)  
 21.0 cm. by 29.7 cm. (DIN size A4)

- ☐ All drawing sheets not the same size. Sheet(s) \_\_\_\_\_  
☐ Drawing sheet not an acceptable size. Sheet(s) \_\_\_\_\_

6. MARGINS. 37 CFR 1.84(g): Acceptable margins:

Paper size

21.6 cm. X 35.6 cm. (8 1/2 X 14 inches)	21.6 cm. X 33.1 cm. (8 1/2 X 13 inches)	21.6 cm. X 27.9 cm. (8 1/2 X 11 inches)	21.0 cm. X 29.7 cm. (DIN Size A4)
T 5.1 cm (2")	2.5 cm. (1")	2.5 cm. (1")	2.5 cm.
L 6.4 cm. (1/4")	.64 cm. (1/4")	.64 cm. (1/4")	2.5 cm.
R 6.4 cm. (1/4")	.64 cm. (1/4")	.64 cm. (1/4")	1.5 cm.
B .64 cm. (1/4")	.64 cm. (1/4")	.64 cm. (1/4")	1.0 cm.

Margins do not conform to chart above.

Sheet(s) 1-10  
 Top (T) Left (L) Right (R) Bottom (B)

7. VIEWS. 37 CFR 1.84(h)

- REMINDER: Specification may require revision to correspond to drawing changes.  
☐ All views not grouped together. Fig(s) \_\_\_\_\_  
☐ Views connected by projection lines or lead lines.  
 Fig(s) \_\_\_\_\_  
 Partial views. 37 CFR 1.84(h) 2

View and enlarged view not labeled separately or properly.

- Fig(s) \_\_\_\_\_  
 Sectional views. 37 CFR 1.84 (h) 3  
 Hatching not indicated for sectional portions of an object.  
 Fig(s) \_\_\_\_\_

☐ Cross section not drawn same as view with parts in cross section with regularly spaced parallel oblique strokes. Fig(s) \_\_\_\_\_

8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)

- ☐ Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned so that the top becomes the right side, except for graphs. Fig(s) \_\_\_\_\_

9. SCALE. 37 CFR 1.84(k)

- ☐ Scale not large enough to show mechanism with crowding when drawing is reduced in size to two-thirds in reproduction.  
 Fig(s) \_\_\_\_\_  
☐ Indication such as "actual size" or scale 1/2" not permitted.  
 Fig(s) \_\_\_\_\_

10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(l)

- ☒ Lines, numbers & letters not uniformly thick and well defined, clean, durable, and black (except for color drawings).  
 Fig(s) 1-10

11. SHADING. 37 CFR 1.84(m)

- ☐ Solid black shading areas not permitted.  
 Fig(s) \_\_\_\_\_  
☐ Shade lines, pale, rough and blurred. Fig(s) \_\_\_\_\_

12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p)

- ☒ Numbers and reference characters not plain and legible. 37 CFR 1.84(p)(1). Fig(s) 1-10  
☐ Numbers and reference characters not oriented in same direction as the view. 37 CFR 1.84(p)(1). Fig(s) \_\_\_\_\_  
☐ English alphabet not used. 37 CFR 1.84(p)(2).  
 Fig(s) \_\_\_\_\_  
☒ Numbers, letters, and reference characters do not measure at least .32 cm. (1/8 inch) in height. 37 CFR(p)(3).  
 Fig(s) 1-10

13. LEAD LINES. 37 CFR 1.84(q)

- ☐ Lead lines cross each other. Fig(s) \_\_\_\_\_  
☐ Lead lines missing. Fig(s) \_\_\_\_\_

14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.84(t)

- ☐ Sheets not numbered consecutively, and in Arabic numerals, beginning with number 1. Sheet(s) \_\_\_\_\_

15. NUMBER OF VIEWS. 37 CFR 1.84(u)

- ☐ Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig(s) \_\_\_\_\_  
☐ View numbers not preceded by the abbreviation Fig.  
 Fig(s) \_\_\_\_\_

16. CORRECTIONS. 37 CFR 1.84(w)

- ☐ Corrections not made from prior PTO-948.  
 Fig(s) \_\_\_\_\_

17. DESIGN DRAWING. 37 CFR 1.152

- ☐ Surface shading shown not appropriate. Fig(s) \_\_\_\_\_  
☐ Solid black shading not used for color contrast.  
 Fig(s) \_\_\_\_\_

COMMENTS: